

REPORT DOCUMENTATION PAGE

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FILE

MEMORANDUM FOR PRS (In-House/Contractor Publication)

FROM: PROI (STINFO)

13 Sept 2002

SUBJECT: Authorization for Release of Technical Information, Control Number: **AFRL-PR-ED-AB-2002-220**
Tim Miller (PRSM) & R. Lasser (Imperium), "Composite Damage Detection Using Novel Experimental Methods" (abstract only)

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Society for Experimental Mechanics Conference
(Charlotte, NC, 01 October 2002) (Deadline: 01 Oct 2002)

(Statement A)

"Composite Damage Detection Using Novel Experimental Methods"

The nondestructive evaluation (NDE) of complex composite structures often requires labor intensive, expensive methods due to multiple failure modes, difficulty detecting damage, and the large scale of the structures. Conventional NDE methods have been fairly successful but can be improved by unifying conventional technologies with more mature concepts. In this work, the technology developed in the infrared camera industry is capitalized on and combined with concepts of ultrasound to produce an inspection tool with a wide angle of view that can reproduce video images of damage in composite structures in real time. Benefits are increased speed and intuitive interpretation of results.